

# Community interventions to change dietary behaviors

Deborah Bowen  
University of Washington  
FHCRC

# Two goals

- To report the results of a community study to change dietary behaviors
- To identify new ways of intervening that could be tested in future research

# Study Design: Overview



# Intervention Plan



# Examples of Intensive Intervention Activities

- **Advisory board and volunteer participation**
- **Cooking Demos and Parties**
- **Healthy Eating education sessions**

# Chef education



# Examples of Minimal Intervention Materials

- **Self-Assessment materials**
- **Self-Help Materials**
- **Shopping hints/tips/recipes**
- **Health fairs**







# Changes in Dietary Outcomes of the EHL Study

	Baseline	12 month	Change
<b>Main Outcomes</b>			
Fat summary score n=3,478			
Intervention	2.44 (2.39,2.48)	2.36 (2.33,2.39)	-0.08 (-0.05,-0.10)
Control	2.50 (2.45, 2.54)	2.47 (2.44,2.50)	-0.02 (-0.05, 0.00)
Difference	-0.06 (-0.12, 0.00)	-0.11 (-0.16, -0.07)	-0.05 (-0.09, -0.02)
Fiber summary score			
Intervention	2.03 (1.98, 2.09)	2.12 (2.07, 2.17)	0.08 (0.06, 0.11)
Control	1.98 (1.93, 2.04)	2.00 (1.95, 2.05)	0.01 (-0.01, 0.04)
Difference	0.05 (-0.03, 0.13)	0.12 (0.05, 0.19)	0.07 (0.04, 0.10)
<b>Secondary Outcomes</b>			
Fruit/veg servs/day			
Intervention	3.79 (3.61, 3.98)	4.05 (3.82, 4.24)	0.26 (0.16, 0.36)
Control	3.71 (3.52, 3.90)	3.83 (3.65, 4.02)	0.12 (0.02, 0.22)
Difference	0.08 (-0.18, 0.35)	0.22 (-0.04, 0.49)	0.14 (0.00, 0.28)
Percent energy from fat (recall)			
Intervention	32.0 (30.7, 33.3)	30.3 (29.0, 31.5)	-1.7 (-3.1, -0.2)
Control	30.7 (29.4, 32.0)	30.3 (29.0, 31.5)	-0.4 (-1.9, 1.1)
Difference	1.3 (-0.6, 3.1)	0.0 (-1.8, 1.8)	-1.2 (-3.3, 0.9)
Fiber (gms) / 1000 Kcal (recall)			
Intervention	11.3 (10.7, 11.9)	12.1 (11.5, 12.7)	0.7 (0.1, 1.3)
Control	11.6 (11.0, 12.2)	11.0 (10.4, 11.6)	-0.6 (-1.2, 0.1)
Difference	-0.3 (-1.2, 0.6)	1.1 (0.3, 1.9)	1.3 (0.4, 2.2)

<sup>1</sup>Adjusted for age, gender, race, education, marital status, children in home

# Conclusions

- ROs are a great place to do health promotion
- The intervention activities and quality of RO life makes a difference
- Baseline disparities in behavior reduced
- Dissemination ongoing

# But....

- Changes were small in magnitude (but meaningful)
- Based on educational/exposure model
- Based on appreciation and prioritization of health as key element

# Community intervention

- Reviews indicate modest success
- Based on increasing awareness
- Based on improvements in knowledge
- Surveys suggest that we already have knowledge and awareness, to an extent
- So, what else is needed?



# How to increase size of change?

- Identify principles from basic social science
- Translate these principles into intervention ideas
- These strategies might increase intensity of effect

# What findings can we use?

- Taste
- Reward/Meaning
- Environmental support
- Economics

# Taste

- People prefer sweet and fat
- High preference foods mean high energy consumption
- Only cognitive blockers protect against consumption of preferred substances

# Reward/meaning

- Nutrition knowledge is not enough
- Perceived deprivation associated with poor adherence to intensive intervention
- People change more with tailored information
- People eat more of valued food



# Environmental support

- People eat more with availability
- People eat more with large portions
- People eat more with variety

# Economics

- Poor people are fatter
- People eat more if it costs less
- SES inversely related to consumption of healthy foods
- Food insecurity is key but needs to be broader

# What might be different?

- No knowledge based materials
- Personal feedback and tailoring, instead of generic materials
- No dieting, depriving
- Increase availability, variety
- Provide cost reduction for healthy foods

# Intervention strategies

- Pay attention to taste
- Tailor to broader variables
- Think about food rewards and meaning
- Make healthy foods varied, available
- Reduce costs on healthy items



# Overall conclusions

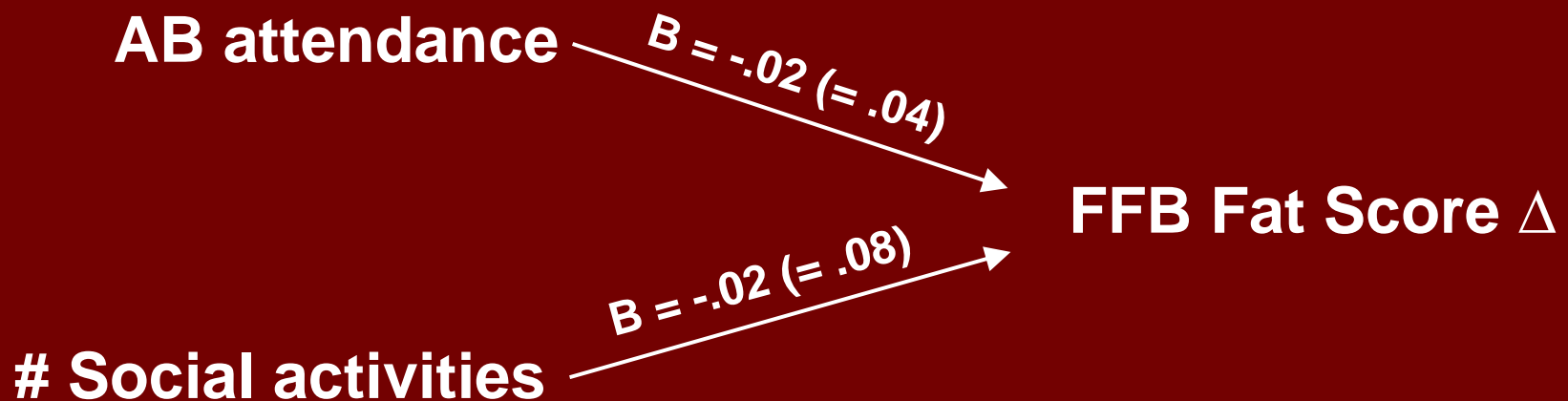
- Applying basic social science findings to public health problems might work
- Knowing how people live can help identify opportunity for intervention
- Setting policy based on research is future effort



# Individual baseline values predict Fat change

- My religious organization supports me in my life
- I care about the people in my religious organization

# Intervention processes predict Fat Change



# Improvements in RO views predict Fat change

- Increases in beliefs that health is an important part of RO mission
- Increases in social connectivity beliefs
- Increases in volunteering at RO